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ABSTRACT

The Far West Laboratory for Educational Research and Development (FWL) conducted a project which focused on the design and validation of models for the linkage and coordination of vocational education at public and private postsecondary institutions with business, industry, and labor. The general procedure followed was to adapt organizational linkage and coordination models derived from an analysis of relevant research and literature. A major portion of the project facilitated the development of a linkage program between the medical assistant program of the Community College Centers of the San Francisco Community College District and a local hospital. Simultaneously, project staff abstracted from the experience the principles and concepts relevant to the design of the public postsecondary linkage model. (A detailed description of this experience is available separately as CE 024 328. An iplementation guide is included.) Another portion of the project designed a private postsecondary model as part of a coordinated research program of the FWL and the International Institute of Food Industries. (A detailed description is available as CE 024 327.) (Project materials and questionnaires are appended.) (YLB)

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BUILDING MODELS FOR THE LINKAGE AND COORDINATION OF VOCATIONAL EDUCATION AT PUBLIC AND PRIVATE POST-SECONDARY SCHOOLS AND BUSINESS, INDUSTRY, AND LABOR

FINAL REPORT

by

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INSTRUCTIONAL AND TRAINING SYSTEMS PROGRAM

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PREFACE

This document is the final report for the project: The Design and Validation of Models for the Linkage and Coordination of Vocational Education at Post-Secondary Institutions and Business, Industry, and Labor. Two additional documents are companions to this report. The first is a monograph containing a linkage model, a case study, and an implementation guide to linkage in a public post-secondary educational institution. The second is also a monograph describing a model and a case study for linkage of a private post-secondary vocational education institution with business, industry, and labor.

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Building Models for the Linkage and Coordination of Vocational Education at Public and Private Post-Secondary Schools and Business, Industry, and Labor

(7/1, 1976 - 6/30, 1978)

EXECUTIVE SUMMARY

The project reported here was supported by a grant from the Research Branch of the Bureau of Occupational and Adult Education, Office of Education. In carrying out the project the Far West Laboratory for Educational Research and Development established coordinated relationships with (1) the San Francisco Community College Center, representing the public post-secondary vocational education sector, and (2) the International Institute of Food Industries in the Monterey Peninsula, representing the private post-secondary sector.

Based on a study of interorganizational linkage and coordination, the project focused on the design and validation of models for the linkage and coordination of vocational education at public and private post-secondary institutions with business, industry, and labor. The general procedure followed was to adapt organizational linkage and coordination models derived from an analysis of relevant research and literature. The adaptation was accomplished through the following stages: (1) describe goals, content and organizational characteristics of selected post-secondary vocational education programs and the goals, occupational programs, and organizational characteristics of identified selected organizations in business, industry, and labor; (2) determine the degree, scope, and intensity of congruence and compatibility of these groups through a comparative analysis of institutional goals, programs, and organizational characteristics; (3) design alternative configurations of program linkage and coordination, and select the most

promising configuration(s); (4) construct a model for program linkage and coordination; (5) specify vocational and work experience and relevant curricula, means, methods, procedures, and resources by which to implement linkage and coordination; (6) develop specific linkage and coordination plans and make arrangements for implementation; (7) implement the program, test and assess the program's impact, and make adjustments as indicated by the assessment; and (8) report the findings.

The overall result of the project was the design, description, and documentation of models for linking and coordinating post-secondary vocational education with business, industry, and labor. The generic characteristics of the models were defined and described in order to make the models applicable for use in a variety of educational settings in communities across the nation. It is anticipated that the overall impact of the use of the models will be more understanding, capability, and willingness among personnel to create linkage and coordination of vocational education with business, industry, and labor.

Four documents were produced:

- Building Models for the Linkage and Coordination of Vocational Education at Public and Private Post-Secondary Schools and Business, Industry, and Labor: A Final Report
- A Model, Case Study, and Implementation Guide for the Linkage of Vocational Education Programs in Public Post-Secondary Institutions and Business, Industry, and Labor: A Monograph
- A Model and Case Study for Linkage of Vocational Education Programs in Private Post-Secondary Institutions and Business, Industry, and Labor: A Monograph
- Building Models for the Linkage and Coordination of Vocational Education at Public and Private Post-Secondary Schools and Business, Industry, and Labor: A Brochure

CHAPTER ONE:

THE PROBLEM AND THE PERSPECTIVE

In this chapter we provide a summary definition of the problem, introduce our view of the problem, and explore the interface between vocational education and business, industry, and labor.

A Summary Definition of the Problem

The design, development, and evaluation of linkage/coordination in education is a relatively new area of interest. For the most part, practitioners have not systematically documented the planning and organizational arrangements required to effectively establish interorganizational linkages for the advancement of vocational education. New approaches are required to meet the increasing educational needs for technical occupations. Projections for the 70's and 80's are for the development of manpower within the labor force requiring more service workers, clerical personnel, and professional and technical workers.

This project addressed the problem of the lack of models for interorganizational coordination between the school and other sectors of the society; models that if implemented would facilitate the career development and occupational preparation of students enrolled in vocational education.

With the sudden surge of growth in post-secondary enrollments, a growing shortage of professionally trained personnel has appeared. There is a need for vocational education professionals who understand the characteristics of the students they will teach and the teacher's role necessary for functioning effectively within the organization.

Although there is extensive evidence of the need for the reorganization of education and work, few agencies have attempted to design a comprehensive plan, encompassing a new system of education, where school, industry, business, and labor linkage systems are formalized in the delivery of vocational education programs. A survey of current practices of linkage and coordination among organizations indicates a glaring omission of the use of information and knowledge from research in the area of interorganizational coordination.

A Broad-View Conception of Education

Education is that domain of human activity which includes all arrangements, resources, situations, and opportunities that facilitate the learning and the development of children and youth and the continuing learning and development of adults.

In the past, when we have spoken of education in this broad sense, we have usually referred to the extension of schooling by relating subject matter to real life. Such relating has allowed students to make occasional excursions beyond the walls of the school, or has brought into the school representatives of the outside world.

The recognition of the need for the project proposed here has emerged from the realization that education is more than schooling. The full development of the individual requires the use of learning opportunities available in all facets of life. Beyond the boundaries of the school, many formal and informal learning opportunities are offered: in the home, through the various media; in peer, neighborhood, social, religious, and other community groups; through community, youth, and adult agencies; through private and public employers; and in many everyday life situations. For too long, these educational opportunities and efforts have been fragmented and separated from

the school and from each other, even though the findings of research* in the domain of interagency cooperation suggests that linkage and integration of similar efforts may generate benefits well beyond those which the separate efforts might produce. A great power potential resides in an alliance among all the sectors of the community and the society that are involved in education.

Accordingly, we define education as a system that includes the school and that has the capacity to integrate all forces and entities that can facilitate learning.**

The central entity of this system is the individual learner. Around the learner are a number of systems designed to contribute to or to facilitate the development of the individual.

Every individual, almost from birth, consciously or unconsciously learns from and about his or her society and culture as a whole. Thus, the Primary Social System is one educational system that surrounds the learner.

Formal education--that is, various kinds of schools--constitute another educational system. In this system we include all those societal organizations whose primary function is instruction. We call this system Educational and Training Systems.

Another system consists of a variety of educational agencies: youth organizations; the church; community education, recreational, and cultural groups, etc. These agencies offer a wide scope of educational and training resources. We call them Informal Educational Systems.

Still another system within education is a complex of many components

*See Chapter Three: Highlights of the Literature Review.

**The section that follows is adapted from: Bela H. Banathy, Redefining the Systems Space in Education.

that are sources of information, knowledge, and expressions of the human experience and are or may become learning resources. Examples of these components might be the press, TV and radio broadcasting, the many forms of art, cultural displays, libraries, etc. In a broad sense, all these aim to communicate something; thus we call them Communication Systems.

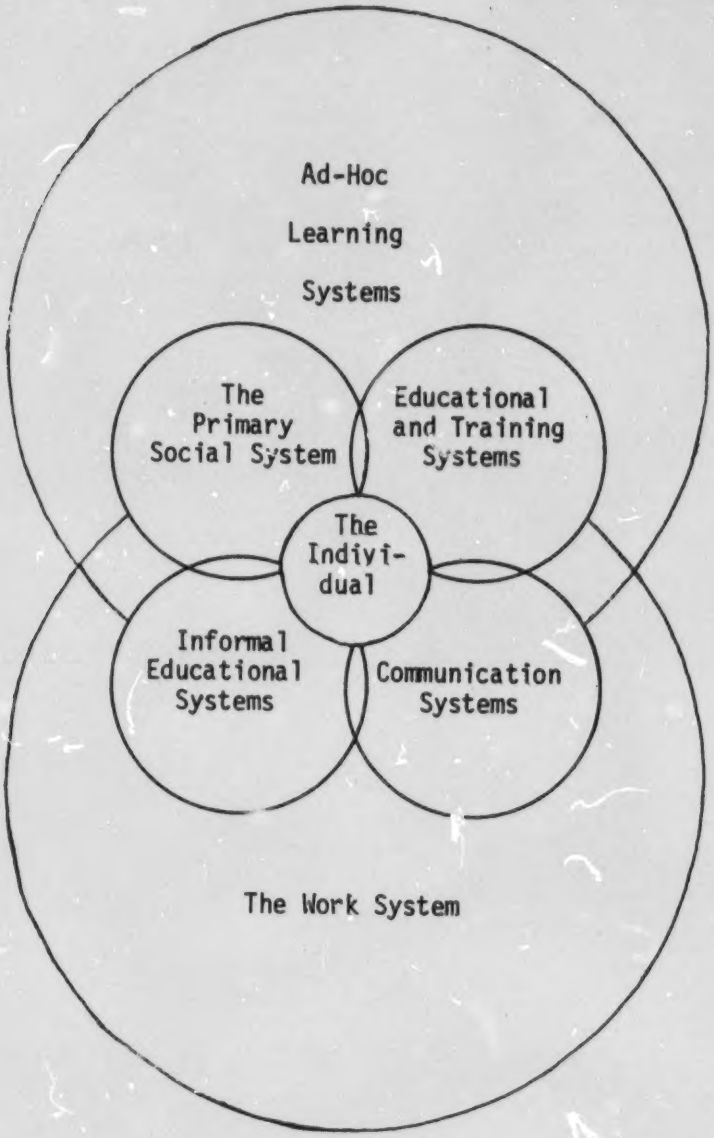
Another area of the human experience that has been a rich source of education and training is business, industry, and labor--the world of work, or the Work System of the public and private employment sectors.

Most of the systems mentioned above offer educational or training resources as a central part of their purpose and existence. Beyond these there is a larger domain that includes life situations, events, and social groups that might offer educational resources in an ad hoc way or as a secondary function. We call these the Ad Hoc Learning System.

The figure on the next page introduces a map of the systems that could be said to comprise a total educational system.

FIGURE 1

A Map of Systems that Might Comprise an Overall Educational System



The system map on the previous page is the overall context within which we shall explore linkage and coordination of vocational education and business, industry, and labor.

The fundamental problem that this proposal addresses is the lack of coordination among the systems described above. For the best and most useful education to occur, all these systems should be closely joined or linked so that they could mutually reinforce each other's efforts and optimize every dollar spent. Such reinforcement and optimization can occur only if linkages among the various systems are devised and cooperative arrangements and a coordinated organizational structure are designed and implemented.

The primary domain in which this linkage and coordination will occur is the community. In a community context we shall attempt to interface vocational education (the school and its vocational education program) and the parts of business, industry, and labor that can make a contribution to vocational education.

The Interfacing of Vocational Education and Business, Industry, and Labor

In the context of the broad-view conception of education, as introduced in the previous section, we shall now explore the issue of linking and coordinating vocational education and business, industry, and labor.

The Seventh Annual Gallup Poll of Public Attitudes Toward Education (Gallup, 1975) reported that the overwhelming majority (86%) of the public favors giving the school the responsibility to work out special programs that will combine education and vocational training.

An analysis of need relevant to the linking and coordinating of education and business, industry, and labor was presented in the current Report of the Manpower Institute (Wirtz, 1975). The report has found that despite our

long experience with practical education in manual training schools, land grant universities and adult education classes, American life is still largely "divided into the time traps of youth for education, adulthood for work, and old age for nothing, thus learning and earning pass as totally isolated chapters." However, these two separate worlds of work and education are out of keeping with the present requirements of American life. The study has also found that too much of the time we are educating people for the wrong thing, because we fail to see work and education as a continuing life combination and we base critical judgments on inadequate or inaccurate information. For example, we measure the Gross National Product four times a year, but this "is all about quantity and nothing about quality, all about dollars and nothing about values, all about the system and nothing about people."

Wirtz (1975) and his colleagues suggest the establishment of community education-work councils, through which school officials, employers, members of labor unions, and members of the public develop and administer education-work programs. The thrust of the project proposed here is essentially the same as that developed by the National Manpower Institute, as we seek to design linkage and coordination of the school and business, industry, and labor.

In the specific area of interfacing post-secondary education and business, industry, and labor, the community college has, in the opinion of many, emerged as the most appropriate training agency for students entering middle level jobs that require a balance of cognitive and manual abilities. Harris (1967) suggested, however, that no significant knowledge is available concerning such matters as (1) the real entry requirements of industry, (2) the extent and value of apprenticeship programs and other training programs conducted by

industry, (3) the extent to which industry makes proper use of technicians, and (4) the effects of changing technology on job requirements.

According to Mills (1968), new approaches and technological innovations will be required by the community colleges to meet the increasing educational needs for technical occupations. In order for students to make intelligent occupational choices there must be accurate and up-to-date information available, not only from standard sources, but also directly from industry. Mills further states that information regarding vocational education instructional material and its appropriate use in college should come from business and industry through the use of advisory committees for various job clusters.

Almarode (1967) also reported concerning community college programs meeting the needs of students in industry. He stated that before developing such programs, the college should survey local industry needs, opportunities for on-the-job training, possibility of part-time work for needy students, and availability of instructors and advisors from industry, trade associations, and unions. If the survey shows a given program to be feasible, an advisory committee should be established to inform the college of industry's present and changing needs, to help select and counsel students, to assist in job placement before and after graduation, to assist the school or the student financially, to recommend essential curriculum content, to provide or help to recruit faculty, and to help publicize the program.

Similarly, Stanton's (1967) set of standards for vocational education include: (1) effective use of lay advisory committees; (2) range of offerings compatible with community survey results; and (3) intraschool, interagency, and industry-education coordination.

A system that we have conceptualized for linking and coordinating business, industry, and labor and vocational education has six salient components:

A. Vocational Education in general--the information base of accumulated (1) knowledge (philosophy, concepts, and principles), (2) findings of research and development, and (3) experience with vocational education programs.

B. Vocational Education as designed and implemented in a specific environment.

C. The School (staff) that plans and implements vocational education.

D. Learning Opportunities, arrangements, situations, and resources available for Vocational Education.

E. Students who make use of learning opportunities.

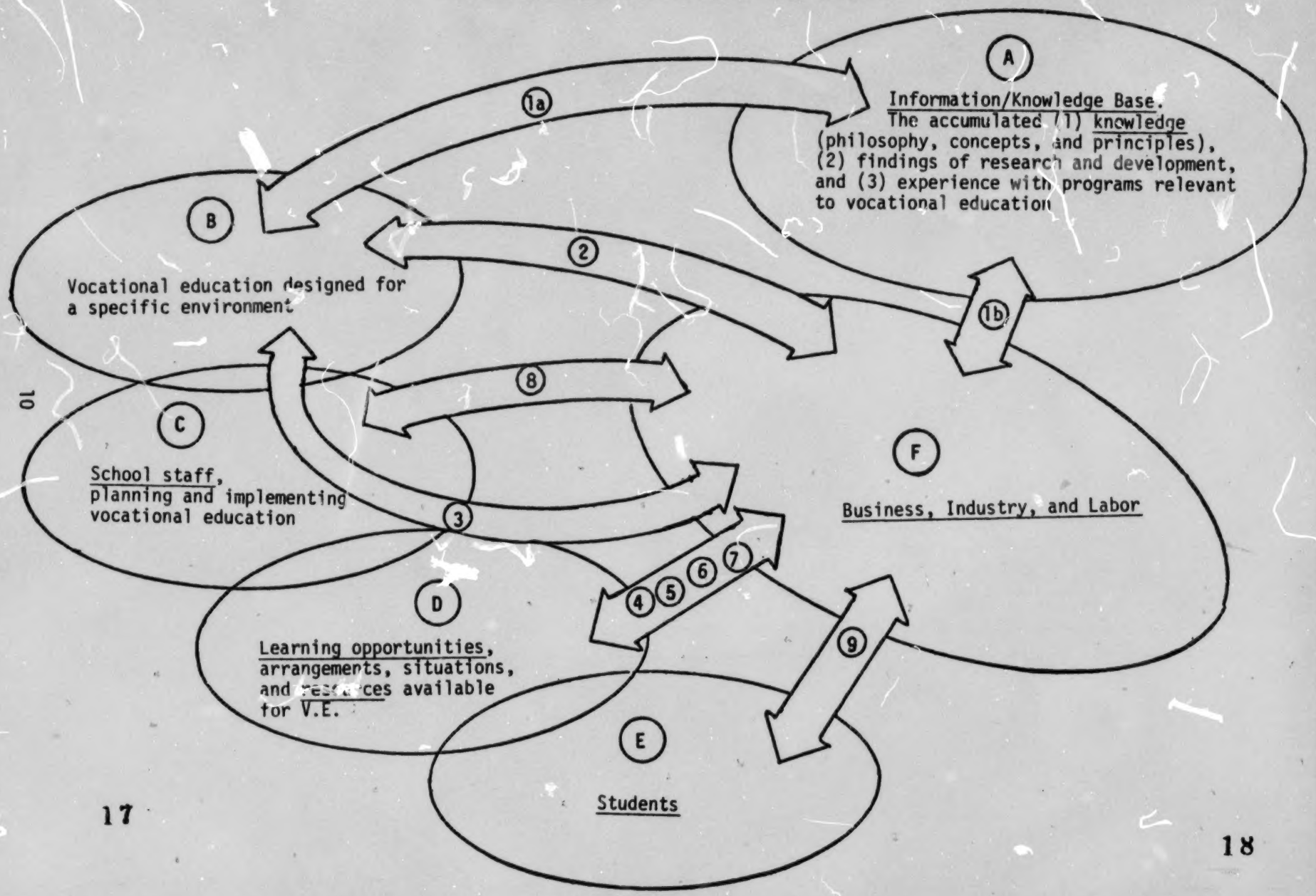
F. The World of Work, Business, Industry, and Labor.

The figure on the next page displays these components and indicates their relationships.

In summary, our intent is to develop and validate a model for the linkage and coordination of business, industry, and labor with vocational education in order to create learning and application opportunities in the business and industrial sectors which will facilitate the career development and occupational preparation of students.

FIGURE 2

A Map of Possible Linkage and Coordination



CHAPTER TWO:

PROJECT OBJECTIVES, ACTIVITIES, AND ORGANIZATION

In Chapter Two we introduce a set of project objectives and report on how the project activities and staff were organized for the carrying out of those objectives.

Overall Project Objective

The overall project objective is to design, develop, and validate models for linking and coordinating the vocational education programs of public and private post-secondary institutions with business, industry, and labor.

The models developed should be useful and effective in a variety of educational settings in communities across the nation.

The ultimate long range expectation is that the application of the models should produce outcomes such as the following:

- the vocational education programs of participating post-secondary institutions will be more relevant to the opportunities and requirements of the world of work;
- students will make more realistic occupational choices and will be more successful in obtaining job placements;
- students will have more successful work experiences and will demonstrate more occupational proficiency;
- the vocational education staff will demonstrate more willingness and competence to link and coordinate with business, industry, and labor;
- business, industry, and labor will demonstrate more willingness and competence to link and coordinate with vocational education programs at post-secondary institutions.

Organization of Project Activities

The carrying out of this project involved three major sets of activities. These activites were as follows:

1. Review the theoretical and vocational education literature dealing with interorganizational coordination and linkage.
2. Work with selected vocational education programs, helping them to design, develop, and implement a linkage program on a pilot basis.
3. Utilizing the knowledge base from the above two activities, produce the following sets of model related documents:
   - a description of a generic model for interorganizational linkage and coordination.
   - a case study exemplifying the application of the generic model in the post-secondary vocational education setting.
   - a guide to facilitate the implementation and evaluation of linkage programs.

Because the overall objective of the project required the production of model(s) for both public and private post-secondary institutions, major activities 2 and 3, as described above, were carried out simultaneously in both a public and private setting. The Medical Assistant Program of the Community College Centers of the San Francisco Community College District provided the public setting. The International Institute of Food Industries provided the private setting. Thus, the specific activities and outcomes as reflected in project products relevant to each of these settings differ. One set of project products provides a linkage and coordination model, case study, and implementation guide for public post-secondary institutions. A second set provides similar products for private post-secondary institutions.

Project Organization

This project involved several agencies cooperating in the analysis, design, and validation of linkage models. This arrangement was reflected in both project leadership and project operations.

The Project Leadership Team consisted of Bela H. Banathy and Jackie Haveman of the Far West Laboratory for Educational Research and Development; William Upton of the San Francisco Community College District; and Axel Duwe of Intersystems.

Project Management was the responsibility of the Far West Laboratory, with Bela H. Banathy as the Principal Investigator, Jackie Haveman as Program Associate, and Marilyn Madsen as Project Coordinator.

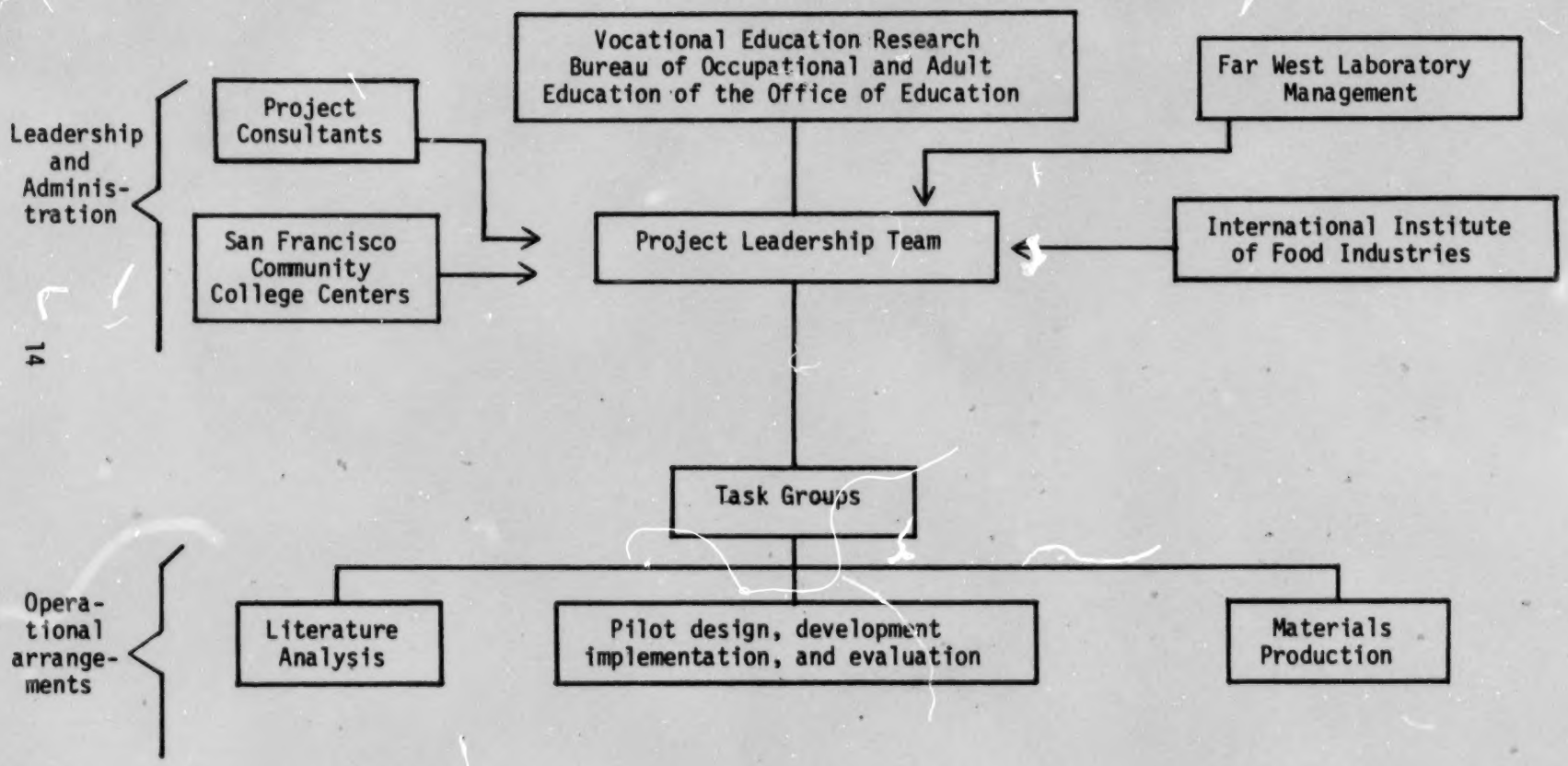
The project was part of the Instructional and Training Systems Program, an organizational arrangement of staff and supporting resources involved in carrying out several projects at the Far West Laboratory for Educational Research and Development. The program thrust includes curriculum research and design; the design of linkage/coordination models; and the analysis, development, and evaluation of instructional and training systems and materials in various subject matter and career areas and fields of professional development. (For detail, see Figure 3).

Task Groups

Project personnel were organized into task groups, each responding to certain project activities such as: (a) literature analysis; (b) pilot design development, implementation, and evaluation; and (c) materials production. Staff from participating agencies functioned in these task groups according to their ability to contribute expertise and resources.

FIGURE 3

Project Organization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Project Leadership Team
International Institute of Food Industries
Task Groups
Operational arrangements
Literature Analysis
Pilot design, development implementation, and evaluation
Materials Production

CHAPTER THREE:
HIGHLIGHTS OF THE LITERATURE REVIEW

Introduction

Throughout project activities, one of the important tasks carried out by project staff was to investigate and update current knowledge of inter-organizational relationships, coordination, and linkage. To develop a knowledge of this area, we reviewed material from three basic sources:

1. A computerized ERIC search using descriptions such as inter-organizational coordination, linkage, and cooperation.
2. Journal articles and books dealing with organizational relationships.
3. Descriptions of vocational education projects involving business, labor, or industry in educational programs.

This section highlights our findings of the literature reviewed. From this review, we attempted to extrapolate the principles, concepts, and findings which appeared to relate to our project focus. This was no easy task. Many leading authors in the field of organizational theory (e.g. Evan, 1976; Kast and Rosenzweig, 1974; Negandhi, 1975) have indicated that a comprehensive theory of interorganizational relations should facilitate both the understanding of interorganizational coordination and linkage, and the development of a model in this area.

Indeed, project staff found that in the various studies many of the same terms and concepts were frequently left undefined or were defined differently in various studies. In one study, for instance, interorganizational relations may be examined through a communication patterns framework, while in another, resource or decision-making flows may be the objective of analysis. In some studies, coordination refers to only cooperative relationships, in others, conflict and competitive relationships are of concern.

In addition, we found that few of the studies reviewed included the testing of hypotheses in a variety of settings. Instead, the emphasis of most studies was on description of interorganizational dimensions in general, qualitative terms. Examples include Evan's concept of organization set (Evan, 1966) and Marrett's (1971) classification of the comparative and relational properties of an interaction network. Although these authors do make predictions and generate hypotheses based on their descriptive analyses, few studies can be found which involve follow-up testing of these hypotheses. Moreover, because of the lack of operational definition of terms and concepts, testing of these hypotheses would be difficult.

We did, however, note some trends that were applicable to the project focus. These include the following:

- The use of systems theory as the analytical framework for understanding organizational functioning.
- The use of exchange hypotheses to provide a rationale and motivation for linkage.
- The lack of guidelines concerning ways to initiate and sustain linkage.
- The development of the concepts of importance to practitioners in the area of coordinating occupational programs with business, labor, or industry.

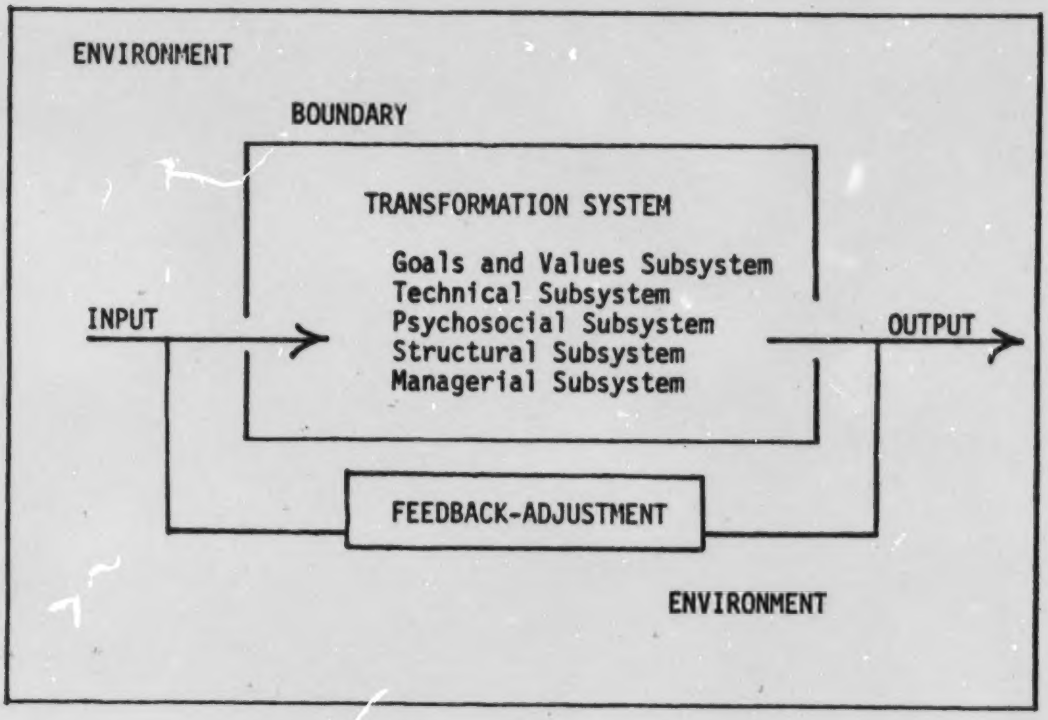
The Prevalence of General Systems Theory

General systems theory as the analytical framework for understanding organizational functioning emphasizes several important general concepts that are relevant to interorganizational relations. Figure 4 presents a general model of an organization as an open system. This figure indicates that the organization receives inputs from the environment in terms of resources (e.g., people, materials), expectations, and demands. It transforms these

FIGURE 4

Model of an Organization

(Adapted from Banathy, 1973 and Kast and Rosenzweig, 1974)



inputs within its system space into goods or services. Feedback and adjustment mechanisms reintroduce information about the state of the output back into the system.

As can be seen from this diagram, the organization transformation system is composed of several subsystems (Kast and Rosenzweig, 1974). These include the goals and values subsystem which refers to those objectives which the organization is trying to accomplish; the technical subsystem, which refers to the knowledge and techniques required for performance of organizational tasks, the psychosocial subsystem, which refers to the interaction of the organization members as they work to accomplish tasks, the structural subsystem, which involves the ways in which tasks are divided and coordinated; and the managerial subsystem, which spans the entire organization by relating all subsystems together in an integrated fashion.

As can also be seen by this diagram, the organization operates within a larger supra system (the environment) which affects and is affected by the organization. Boundaries separate the organization from its environment and set the parameters or domains for organizational activities. For an organization to be viable over a long period, these boundaries must be open in order to facilitate adaptation to a changing environment.

Any organization should include boundary personnel whose function is (1) to maintain or expand the boundaries of the organization and (2) to serve as a point of contact with other organizations. We refer to this function as a linkage.

The above systems concepts have direct relevance to this project's focus and to the general problem of coordinating vocational programs within the larger business, labor, and industrial community. If the objective of the coordinated effort is to be carried out on a long-term, sustaining basis,

boundary personnel from the various organizations, who represent their respective organizations as a system, must be involved in the linkage process.

Moreover, the linkage process itself must operate as a system. That is, the linkage activity must involve tranforming inputs from the participating organizations into outputs which feed back to the participating organizations. To accomplish these transformation tasks, those involved in the linkage activity will need to be concerned with the various subsystems (goals and value, technical, psychosocial, structural, and managerial) of the linkage system.

For the purposes of this project, we used these subsystem concepts in developing our model and in working with the participating institutions. Far West Laboratory acted in a managerial capacity which we designated as Linkage Facilitator. Boundary personnel from the participating institutions took part in the linkage design and implementation process. Together these people were responsible for developing the component subsystems (other than managerial): such as, goals and value, structural, technical and psychosocial.

The Exchange Hypothesis

Our review of the literature revealed that, in addition to drawing from systems theory, the studies frequently cited the "exchange hypothesis" as having provided the rationale or motivation for organizations to enter into linkage activities, as well as for having influenced the nature of the goals of this activity. According to the exchange hypothesis (Levine and White, 1961), interactions occur between organizations because they do not have access to all resources they need to accomplish their goals. Thus, in order to maximize goal attainment, organizations will enter into exchange relationships with one another in which trade-offs are arranged between the organizations (either in terms of inputs or outputs) which will facilitate each organization's

goal attainment. For example, educational institutions may voluntarily agree not to duplicate occupational programs in which they are in competition for the same student population.

Extrapolating from the exchange hypothesis, we feel that coordinated linkage between organizations is most likely to occur when two organizations have congruent or complementary goals and values subsystems. This contention is further supported by the work of Reid (1964) and Litwak and Hylton (1962). In addition, complementary technical, structural and psychosocial subsystems will facilitate the linkage effort.

The exchange concept will further influence the nature of the linkage effort. Examination and analysis of those aspects or organizational functioning which might be facilitated by exchange or coordination will serve to guide the linkage activity and to shape the goals of the linkage system.

Costs and Benefits of Coordination and Linkage

The exchange hypothesis, coupled with the notion of scarcity of resources, also points to several other concepts which are important for the linkage effort and model development. The linkage activity itself will require resources. In order for an organization to enter into the coordination process, a minimum of resources will be required in the form of time and personnel. Additional resources may be required; this will depend on the complexity of the linkage activity. If organizations are not prepared (or are unable) to devote resources to engage in linkage, then the linkage activity is apt to be less successful.

Beal and Middleton (1975) have outlined a list of possible costs and benefits which we have adapted to an education perspective. These include the following:

BENEFITS (Potential)

1. Maximization, optimal use of, or expansion of resources base. (Resources may include money, physical facilities, equipment, supplies, curricular materials, services, administrative and instructional staff, paraprofessionals, volunteers, and available knowledge and skills.)

2. Reduction of program duplication or overlap.

3. Enlargement of scope of present programs.

4. Ability to reach new and different groups of students.

5. Creation of more effective programs (programs with more impact on students).

6. Coordination and integration of each organization's input into larger programs with a resultant greater impact.

7. Elimination of mistrust, competition, or conflict.

COSTS (Potential)

1. Loss of some autonomy.

2. Allotment of time and energy needed to initiate and maintain linkage.

3. Creation of potential for difficulty in determining benefits.

4. Creation of potential for diffusing success or failure. (As a result, who takes credit for success or failure?)

5. Exposure of organizational weaknesses.

It should be noted that these costs and benefits have been outlined from an institutional perspective. There is one other level of costs and benefits that will influence the linkage process: costs and benefits from the individual perspective. Boundary personnel engaging in linkage activity must be able to perceive not only the potential benefits or losses for the institution, but also the potential benefits or losses for themselves. If there are no immediate benefits or pay-offs to induce the individual to engage in a coordinated effort, then it is unlikely they will feel any commitment to the success of the effort.

Intervention Strategy Guidelines

Early in the history of interorganizational literature, Reed (1964) had distinguished between "mediated" and "unmediated" coordination mechanisms. Unmediated coordination occurs between two or more organizations without the involvement of another agency; mediated coordination involves a third party agency (e.g., a community council). Thus, in reviewing the literature relevant to our project focus, we were particularly interested in finding out what strategies or mechanisms were used to design and implement both mediated and unmediated activities.

In analyzing the vocational education literature, we reviewed many projects that involved business, labor, or industry with an occupationally oriented educational program. Although we found elaborate descriptions of the specific programs, we could find little concerning how the participating institutions designed the specific programs to meet their needs. We could not determine what process they went through to arrive at a specific program design.

Although this lack of emphasis on design and planning of a specific program is only indirect evidence, we feel that it supports our belief that many times the specific programs are arrangements that occur on an ad hoc basis. Because the programs have not been designed to be a linkage of two institutions with planned support, commitment, and managerial coordination, these programs frequently do not continue on a sustained, adaptive basis.

Our finding that the literature concerning vocational education did not contain any substantial process description or models for creating linkage has been confirmed by Whetten (1974). From an organizational management perspective, Whetten and others have commented that little work has been done to assist policy makers in their attempts to develop coordinated systems.

We did find two such models, however, outside the vocational education realm. The first was developed by Klonglan and his associates at Iowa State University (Creating Interorganizational Coordination by Klonglan, Mulford, Warren, and Winkelpleck, 1975). The model was designed for local civil defense coordinators with the task of getting different agencies to work together to meet civil preparedness situations. The second was done by Beal and Middleton at the East-West Center (Organizational Community and Coordination in Family Planning Programs by Beal and Middleton, 1975). As the title indicates, this model was developed for use by family planning agencies. The procedures outlined in these models contributed to our model development activities.

Concepts and Importance to Practitioners

In reviewing occupationally oriented education programs involving linkage, we examined program descriptions that came from two sources. These included projects which were pinpointed in our ERIC search and all Federal and California state projects funded under Part C or D of the Vocational Education Amendments over the past two years. We were interested in extracting from these descriptions the recurring elements that the authors felt motivated, sustained, or otherwise characterized concrete linkage-type activities. Early reading of the documents indicated that several broad description categories characterized either the activity described or the recommendations set forth by the authors. These included the following categories:

Attitudes	Infusion
Clear Definition	Liaison Groups
Constant Communication	Mutual Need
Dissemination of Information	Planning
Exposure/Reinforcement	Reduction of Duplication
Financial Limitations	Social Responsibility
Image	Standards

Using this set of categories, we then completed a content analysis for all projects. A simple frequency count was then computed for each category. The following categories were found to be most frequently mentioned:

Mutual Need: The degree to which similar or congruent needs and problems will cause organizations/groups to cooperate.

Liaison Groups: The degree to which advisory committees, coordinators, ambassadors, professional groups, councils, and conferences serve to increase linkage and cooperation.

Exposure/Reinforcement: The degree to which awareness of and familiarity with program successes are needed to maintain and increase linkage involvement. (The exposure techniques include project publicity, contact, discussion, and lectures.)

Constant Communication: The degree to which constant channels of information exchange are needed, the need to monitor, obtain feedback and follow-up; the need to validate accuracy, relevancy, and currency, (up-to-dateness) with the exchange of information.

Clear Definition: The degree to which a precise statement of philosophy and goals must be made; the need for defining and differentiating spheres of activity; the need for explication of roles and relationships of the participating groups/people; and, finally, the need for a thorough definition of the practices and procedures that related to these roles.

Standards: The degree to which the assurance of a certain level of performance or quality is needed to develop linkages; the need for accreditation, demonstration of effectiveness, and/or production of results.

Planning: The degree to which surveys and research produce and enhance linkage and cooperation; the need for joint input and planning in order to link cooperatively; and the effect of legislative directives and pressures from social plans and interests on organizational cooperation.

It should be noted that this task was carried out independently of the reviews of the sociological and organizational literature dealing with inter-organizational relationships. The results of this analysis of the discussions of practitioners were quite compatible with the review of the more abstract theoretical studies of interorganizational relationships. For example, the mutual needs category has as its counterpart the exchange hypothesis; the liaison groups relate to boundary personnel. Somewhat unanticipated, however, was the importance the reviewed articles in this grouping placed on the need for clear definitions and standards in linkage activity. We did not find this in the review of the more theoretical literature.

Conclusion

The brief literature review presented above is intended only to highlight the literature dealing with interorganizational relationships, coordination, or linkage. It may enable the reader to develop an understanding of the elements which we included in designing a model which will facilitate coordination of organizations in the area of vocational education. The understanding which we gained through conducting this review, combined with our experience in working with an actual educational institution to develop a linkage program, provided us with the knowledge base to develop our linkage and interorganizational coordination models. A description of these models can be found in two monographs which display findings about the public and private institutional components of the project.

CHAPTER FOUR:

PROJECT EVENTS IN THE PUBLIC POST-SECONDARY EDUCATIONAL INSTITUTION SETTING

Introduction

As indicated earlier, a major portion of the project was spent on working with a vocational education program in a public post-secondary educational institution: the Medical Assistant Program (MAP) of the Community College Centers of the San Francisco Community College District. The project facilitated the development of a linkage program between MAP and a local hospital. Simultaneously, while working with the MAP, project staff were abstracting from this experience the principles and concepts relevant to the design of the linkage model.

Preliminary Activities

The Far West Laboratory's (FWL) involvement with the Community College Centers program was enhanced by a subcontract with the San Francisco Community College District. This subcontract was approved by the SF Community College District Board of Governors in November, 1976.

Under the terms of this subcontract the Community College Centers paid for staff and clerical support for linkage activities. Dr. William Upton, a career guidance counselor for the Centers' program was selected to provide a leadership role for the Centers' project-related activities. In this capacity for the purposes of project activities, Dr. Upton was designated the Linkage Coordinator. The FWL project coordinator, Marilyn Madsen, working with Dr. Upton, was designated the Linkage Facilitator.

A series of meetings was held with the administration of the Community College Centers to select a specific program with which to work. Participants in these discussions included Dr. Calvin Dellefield, President of the Community College Centers, members of the Centers' administrative staff, and Far West Laboratory project staff.

As a result of these discussions the Centers' administration recommended the Medical Assisting Program (MAP) as the environment most appropriately suited to the development of linkage/coordination activities because of the Community College's interest in expanding the programs and services provided in this area. A meeting was scheduled by the Linkage Coordinator with the Assistant Director of Galileo Community College Center (the Center having administrative responsibility for the MAP), Mr. Bergman, and the Coordinator of the MAP, Ms. Jeanne Duckett. The purpose of this meeting was to present the proposed project and describe specific roles the Laboratory and the District staff would assume during the design, development, and implementation of the linkage activity. On the basis of these meetings, it was decided that the MAP would be involved in the project.

Initial Work with the Medical Assisting Program (MAP)

After selection of the MAP as the appropriate program with which to work, project staff began an analysis of the MAP. Project staff wanted to know the goals, curriculum content, and operation of the program. The following provides a summary description of the MAP program. A more detailed description is included in Appendix A.

The primary goal of the MAP is to introduce students to the responsibilities and skills related to the clinical aide who assists the physician in private practice or hospital facilities. Each MAP student must have a high school education or the equivalent. Approximately 1000 hours are spent in training in two basic areas: Office Management and Clinical Assisting. These hours include time spent working in the field in a doctor's office or hospital facilities.

After gaining an initial understanding of the program, project staff began to assess which areas represented a potential for development of the

linkage program. This assessment was carried out by the FWL staff in conjunction with Jeanne Duckett and Dr. Upton, the Linkage Coordinator.

One of the first things mentioned by the MAP was the establishment of a Program Advisory Committee. Up to this point, the MAP had been functioning with no Advisory Committee input into the program. Because it was felt that the Advisory Committee would serve an important program function in providing motivation for, as well as pinpointing potential linkage areas and groups. A committee was organized with the aid of project staff. Members of this committee included representatives from San Francisco's private and public hospitals, private physicians, and the Community College Centers' administrative and instructional staff. (A list of advisory members is included in the Appendix B.)

On May 10, 1977, the first Advisory Committee meeting was conducted with the twelve selected Committee members, representatives from FWL, District administration, and staff from the MAP. The major issues addressed included the following: (1) the needs perceived by hospital personnel and physicians regarding the skills and training most needed by students entering the job market, (2) general opinions regarding the quality and effectiveness of the training provided by the MAP, and (3) recommendations for linkage activities and arrangements most needed related by the MAP.

From the discussion at the Advisory Committee meeting, the need for establishing closer ties between the MAP and hospitals was clearly articulated. An Advisory Committee Questionnaire was given to each member to obtain information regarding types of ongoing linkage arrangements currently in operation and a rank ordering of linkage activities most feasible in each situation. The category "strengthening the student internship program" emerged as the highest priority area for the majority of respondents,

In addition, several hospitals indicated an interest in establishing or strengthening their activities in this area.

Project staff were in general agreement with the Advisory Committee that strengthening of the internship program represented a potential area for linkage. Although the MAP already had a formal period of training in which students could obtain first-hand experience in a hospital or clinical setting, it was felt that this was not operating at its maximum level. Because of the time commitments of MAP teaching staff, contacts with potential sites were often left up to students. Moreover, little time was available for follow-up or evaluation of student performance.

Given the program focus as agreed upon, the Linkage Facilitator visited several potential linkage sites. The project was explained to each person contacted. In addition, the MAP program was reviewed and the goals of the intership experience explained. It was pointed out that a linkage program would require commitments of time and resources to design and implement a program meeting the needs of both agencies.

From these discussions, the Volunteer Program of Presbyterian Hospital emerged as a potential organization to enter into a linkage design program. The goal of the Volunteer Services Program is to provide qualified volunteers to serve the patients and doctors at the Presbyterian Hospital and its related facility, Pacific Medical Center. The program has a specific mission to develop a quasi-professional corps of volunteers who can serve in many areas. Although specific areas where volunteers are placed can vary depending on availability, the usual areas are: emergency unit, outpatient clinic, mail and escort services, medical staff office, and EEG laboratory. (A more detailed description of the Volunteer Services Program is provided in Appendix C.)

Although students had been, prior to this time, receiving credit for their internship experience at Presbyterian, the program was rather loosely conducted and supervised. Indeed, the Director of Volunteer Services at Presbyterian indicated that he had just learned that MAP students were working in his hospital.

Before designing a linkage program, however, FWL project staff and Dr. Upton met with the administration of Presbyterian to receive formal approval for entering into linkage program design. This approval was received.

A further series of meetings was held to establish who from Presbyterian Hospital should be involved in the design of the linkage program. In addition to the Coordinator of Volunteer Services, potential persons to be involved were the Director of Personnel (an involvement which would possibly facilitate a transition to a permanent job in the hospital for the students) and the Director of Education for the hospital.

It was felt, however, that because so few job openings arose at the hospital that the involvement of the Personnel Director was not crucial to the design of the linkage program. Further, the Education Director felt that the program more appropriately fit within Volunteer Services in as much as issues of insurance liability for students and on site instruction were of concern.

With the establishment of the appropriate persons to be involved in the program, the project was now ready to move into its design phase. Persons involved in the design phase were designated the Design Committee. These included: Ms. Marilyn Madsen, FWL Project Coordinator, Linkage Facilitator; Dr. William Upton, Community College Center, Linkage Coordinator; Ms. Jeanne Duckett, MAP Instructor; Mr. Henry Schulz, Director, Volunteer Services; and Ms. Jacki Tarantino, Volunteer Services.

Design of the Linkage Program

During the design phase, representatives of the two agencies (Volunteer Services and the MAP) and FWL met together to design a linkage program meeting the needs of both agencies. FWL exercised both a facilitating and leadership role in this activity. At times, the Linkage Facilitator met with each group separately to clarify expectations and proposed activities. At other times, representatives of the agencies met together.

Initial discussions focused on developing a common frame of reference so that each participating organization understood how the other functioned. The goals of each program were reviewed so that areas of goal overlap or compatibility were apparent.

The area of greatest goal and function congruence was the following: Volunteer Services wanted to upgrade the quality of the volunteers placed on the various service units at the hospital. On the other hand, the MAP wanted to provide students who had some initial skills in the medical assisting area with some "hands on" experience that would enhance their capabilities for finding employment. From FWL analysis, project staff felt that it was not as important to the MAP that students attain specific knowledge objectives as it was that students experience a real world working situation in a clinical setting.

Both groups also expressed their own particular areas of concern. Volunteer Services wanted to establish procedures for screening students and wanted to ensure that the influx of students proceeded in an orderly matter. The MAP was interested in obtaining evaluations of student performance and in ensuring that some record of their attendance was maintained. Moreover, the MAP wanted students to understand the various service units of the hospital. FWL project staff, in turn, were interested in ensuring that procedures for

communication between the agencies were developed.

Based on this series of design discussions, a linkage program was developed. FWL staff, in cooperation with the MAP and the hospital, provided leadership in developing the necessary materials to support proposed linkage activities. The following describes the procedures and documents developed during this phase of project activity:

1. A procedure for scheduling student interviews at the hospital as well as the content areas to be covered in the interview.
2. A MAP student profile sheet regarding the students background, skills, and interests in training areas related to medical assisting.
3. A description of the MAP for use by the hospital.
4. A description of the Volunteer Services Program for use by the student.
5. A description of the units within Presbyterian Hospital which might be of potential interest to students.
6. Student placement and attendance forms.
7. Student evaluation forms.

These procedures and materials were designed and developed during the spring and summer of 1977 in preparation for a fall pilot testing of the linkage program.

Pilot Test of the Program

The pilot program was conducted during the fall of 1977. Prior to implementation of the pilot program, an orientation was held for members of the MAP and Volunteer Services staff on September 26, 1977. At this meeting, the sequence of activities and materials were reviewed by everyone to ensure that all parties had a similar understanding of the pilot program.

The pilot-program was initiated in October, 1977, and was conducted in January, 1978. At the time of the project's end, students had nearly completed the 140 hours internship experience required for graduation from the MAP. Evaluation of the pilot program is described in the Evaluation Activities section.

Post-pilot activities between MAP and Volunteer Services

At the end of the pilot program, a meeting was held to discuss its effectiveness. All participants generally agreed that the pilot program had been successful and should be continued. The Director of Volunteer Services specifically felt that the students working in the hospital had been outstanding. Recommendations were made that communication channels should be more closely specified.

Evaluation Activities

Although evaluation activities are being described in a separate section, it should be noted that data collection activities occurred throughout the project. The purpose of these activities was to obtain information regarding the design and development process and to assess program implementation. During the design and development phase, the following data was collected. Copies of the data collection instruments are included in indicated Appendixes:

Advisory Committee Questionnaire (Appendix D): The purpose of this questionnaire was to assess the committee's familiarity with the MAP and to obtain information regarding potential linkage areas.

Design Committee Critique, Part I (Appendix E): The purpose of this questionnaire was to obtain data concerning the Design Committee's views of the linkage design process.

Design Committee Critique, Part II (Appendix F): The purpose of this questionnaire was to obtain data concerning the Design Committee's view of linkage arrangement prior to its implementation.

During pilot program implementation and priot to the end of the project, the following data collection activities took place:

- Design Committee Questionnaire (Appendix G): The purpose of this questionnaire was to obtain data concerning the Design Committee's views of the linkage arrangement after its implementation and to obtain suggestions for the future.
- Student Questionnaire (Appendix H): The purpose of this questionnaire was to obtain information from the students participating in the pilot program about its effectiveness.

Summary of Evaluation Results

Advisory Committee Questionnaire: Advisory Committee members, in general, indicated that prior to the first meeting of the committee, they were not very familiar with the MAP structure or functions. They had generally positive reactions to the notion of linkage and felt that the strengthening of the MAP internship program was of the most importance. Others suggested areas such as inservice training, job placement, and facilities sharing.

Design Committee Questionnaire. Part I: The Design Committee had generally positive attitudes toward the design and development process. Prior to the project, there had been minimal interaction between the MAP and Presbyterian Hospital. Everyone agreed that the meetings were effective in facilitating better communication. There was also general agreement that the meetings would not have occurred without the intervention of the third party: Far West Laboratory.

Design Committee Questionnaire. Part II: The Design Committee had a favorable opinion of the linkage arrangement as designed. They felt that the program made effective use of their resources. There was some

concern over the complexity of communication that would be necessary to carry out the program. The hospital, in particular, felt care would need to be taken to monitor student attendance.

Design Committee Post-Questionnaire: Both the Community College and Volunteer Services felt that the linkage program was successful. One major problem had been the amount of communication and time required to carry out the program as planned. In as much as the MAP Coordinator had no clerical support and a full teaching load, she sometimes had difficulty contacting the Volunteer Services Coordinator. This had resulted in some student scheduling difficulties. Both parties felt Far West Laboratory had played an invaluable role. Both also wanted to continue the program with the recommendation that the MAP coordinator receive some additional help.

Student Questionnaires: Students generally found the internship experience to be very useful. They felt that the hospital staff was making a real effort to give them a meaningful experience, although they indicated they would like more patient contact. They also indicated that the information they had been given prior to working in the hospital had been helpful. Two areas where they felt more information was needed were more complete job descriptions and more emphasis on doctor's expectations and evaluation.

Follow Up Activities with the Community College Centers

As the project ended, two sets of activities were being initiated by the Community College Centers in the linkage area. The first was work with additional hospitals to create a linkage arrangement similar to the

one with Volunteer Services. Planning and initial discussions were being carried out with San Francisco City and County Hospital (a public hospital) and with the Ralph K. Davies Medical Center (a private hospital).

Additionally, Dr. Upton, designated the Centers' Linkage Facilitator for this project, contacted other Center occupational programs to see if they were interested in designing similar linkage activities. Although there was a general interest, the programs unfortunately had limited resources for this type of activity.

Summary of Linkage Experience with the Community College Centers

It was generally felt that the project's work with a public institution in designing a linkage arrangement was successful. The internship arrangement developed and implemented between the MAP and Volunteer Services resulted in an improved internship experience for the students.

From the experience, project staff learned very clearly that the design, development, and implementation of linkage requires commitment and resources from all those participating. In the project, the Centers received external support and financial resources from the Laboratory. Even with this support, it was sometimes difficult to carry out all activities necessary to implement the linkage program.

A more detailed analysis of the experience of the Centers' program and linkage is presented in the Case Study contained in the monograph which is a companion to this report.

CHAPTER FIVE:

PROJECT EVENTS IN THE PRIVATE POST-SECONDARY EDUCATIONAL INSTITUTION SETTING

Introduction

In this chapter we describe that portion of the project which aimed to design a model to (a) link private post-secondary vocational education with business, industry, labor, and other societal sectors, and (b) establish interorganizational coordination that is beneficial to all participants.

The design of the private post-secondary model was created as a coordinated research program of the Far West Laboratory and the International Institute of Food Industries.*

This chapter is developed in four sections:

- First, the institutional need that called for the coordinated research program is highlighted;
- Second, a narrative summary of project history is reported and staff and participants are identified;
- Third, substantive project events are presented, and
- Finally, project achievements are summarized.

A detailed description of the private post-secondary model and the case study is rendered in a separate document: A Model for the Linkage of Vocational Education at Post-Secondary Private Schools and Industry, Business, and Labor: A Monograph. This monograph can be obtained from National Teaching Systems.

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*A component of the Academy of Arts and Humanities in the Monterey Bay Area, California.

Statement of Need for Research

An analysis of the state of post-secondary education in Monterey County indicated three major needs:

1. Augmentation of existing junior college, two-year programs by adding two upper division years, leading to B.A./B.S. degrees.
2. Creating a school with local bias, to provide university-like study opportunities leading to B.A. and M.A. degrees.
3. To widen and intensify the scope of vocational training programs with special sensitivity to local training and employment requirements.

It became equally self-evident that conventional funding means were totally inadequate to create or support such institutions. It was the realization of this fact which motivated the seeding of a new alliance, involving all sectors of the community in the planning and development of educational entities. Because of its obvious relevance to Monterey County, the International Institute of Food Industries was chosen as a first project. Quickly the involvement of the private sector could no longer be directed efficiently towards the stated goals, without a formal, negotiable arrangement to coordinate the multitude of efforts and interests.

It was at this stage that Far West Laboratory and Intersystems, Inc. decided to join forces to further individual and mutual objectives. Intersystems needed a streamlined, effective communication ladder to advance the development of its schools; Far West Laboratory required a post-secondary school in its formative stage to develop the model of formalized private sector/educational institution linkage arrangement. Each organization considered the services rendered by the other as sufficient reward and the joint project was initiated August, 1977.

Project History

As local educational choices were evaluated, one major fact became self-evident--they served only a part of the community's population and satisfied only a portion of the population's educational needs.

Before an effort was made to develop strategies to improve this condition, previous efforts were analyzed and the reasons for their failures evaluated. This led to a "pattern for failure," which, in part or in whole, was shared by each of the ventures studied. The list itemizes like this:

- They were all not-for-profit corporations, governed by directors without personal profit interests in the company. Therefore, leadership in the early stage of the operation was without a profile for chain of command, accountability and reward.
- They were created by a group of people who shared an educational ideal; however, their personal commitments to this common bond were never identified.
- Each case evolved as an idea of a few interested people, who proceeded to sell it to the community for the primary purpose of raising funds.
- Inability to gain credibility was the ultimate cause for failure. The reason being, that most vital elements of success for an educational venture, such as school approvals, accreditation, financial budgeting and overhead anticipation were generally amorphous.
- Private or foundation contributions were generally considered as the major sources of support.
- Curricula and educational programs were defined as "ideal goals," but never transformed into "marketable programs."

- Each effort was isolated from the mainstream of the community, limiting participation to funding and public relations.

As a result, only three private colleges succeeded in the area during the past 20 years.

- The Institute of Foreign Studies (non-profit school with a six-year program starting with upper division, undergraduate classes in language and foreign relations)
- Monterey Law School (a non-profit law school implemented and operated by a group of local attorneys)
- The Academy of Arts and Humanities (a profit-making, private corporation with a broad field of six-year programs)

It became clear that if any major changes were to happen in local educational offerings, a model would have to be developed which would dramatically differ from what had become a "conventional local design" for starting educational ventures.

After a year of trial and error, three major elements were established as prerequisites for success:

- Credibility. In recent histories of new educational ventures, failure is eminently more prevalent than success. This required that all component elements of a masterplan must be designed to function in a "near zero tolerance for error" situation. Strategies had to be developed meticulously, and the most professional assistance in educational research and development had to be sought.
- Self-Support had to be the major premise for growth. In view of shrinking personal contributions in the area and an ever increasing competition for foundation and governmental funding, tuition became evident as the sole reliable source of continued support. This

realization imposed the major discipline on the design, because it meant that (1) courses had to be relevant, (2) skills gained were marketable, (3) the time and cost effectiveness of instruction had to be competitive, and (4) facilities and resources had to be commensurate with programs, as well as meet accreditation criteria.

- Private Sector Involvement would have to exceed conventional boundaries of school-community interaction. But instead of concentrating efforts on extracting financial support, the community was to be involved in establishing employer job/hiring criteria, sharing resources, obtaining expert faculty; in short, in the entire process of school and program development.

A final summary statement was issued in June 1977 by the Central Coast Educational Consortium (C.C.E.C.) proposing a new alliance among all sectors of the community to be formed for the purpose of developing an operational long-range masterplan for the area's educational development.

On August 11, 1977 Dr. Bela Banathy from Far West Laboratory for Educational Research and Development became aware of these efforts and offered an involvement in the linkage project conducted by Far West Laboratory. The linkage and interorganizational coordination approach developed by the Laboratory appeared to be a solution to local barriers. An arrangement was made between the two institutions to join in the curriculum design of the International Institute of Food Industries (Departments of Culinary Arts and Fisheries & Aquaculture). It was anticipated that the outcome of this joint effort would be the design of the post-secondary private education linkage model.

The months of September and October were spent in orienting the potential participants and exploring the needs of relevant industries and the community.

Linkage discussions were initiated early in February 1978, and as barriers were encountered, energy was concentrated on modes of identifying and removing early problems preventing meeting attendance and general participation. The necessity to motivate participation by demonstrating the tangible (financial) advantages of the linkage process surfaced early. By early March a viable strategy to stimulate and facilitate participation in the linkage arrangement was developed.

The "Intra-Organizational Evaluation Stage" was commenced at a meeting March 11, 1978. It was conducted in order to aid representatives of participating organizations to examine their home base, to determine areas of relevance, potential benefits, and contributions to the project. For the first time, the definition of the schools, and their future potential became a direct objective of discussions, leading to the development of an "Organizational Questionnaire." Insight gained from these efforts led to a process of gradual integration of the school into the industry, stimulated by efforts to accommodate participants' need for a higher organizational order to deal with industry related problem areas. The end product of this interorganizational coordination design was the development of a framework allowing integration of activities among all participants. By early May, the linkage arrangement was firm enough to allow the inversion of priorities: from concentrating on the development of linkage arrangements, to focusing linkage coordinated energies on the development of the schools' curricula. This moment in the growth state was defined as the "Inversion Point."

Implementation procedures began in late May and continued through the publication of this report in July. Faculty recruitment, final curriculum planning, and catalog publication were expected to be completed by August 20, 1978, and classes in the Department of Culinary Arts and Fisheries were to commence September, 1978.

The Department of Agriculture and Food Process Industries will be entering the planning stage following the established model and repeating the calendar of events approximately this season, September '78 through September '79.

Substantive Events

To fully benefit from the experiences of this project, it must be understood that two disparate courses of action were initiated. The purpose was to reverse the effect of one on the other during the development. At first, the goal was to create a linkage model which required the formation of a school as a raison d'etre; later on, the development of the school became the objective to which the linkage arrangement was applied. Somewhere in the course of the development an Inversion Point had to be reached at which the catalyst became the goal and the goal, the catalyst. Evaluation of the effectiveness of strategies is achieved by first rating the impact of the school as a stimulus (catalyst) on the linkage design. After the inversion point, the impact of the negotiated linkage agreement (catalyst) on the development of the school becomes the measure.

It must be observed that the primary purpose of this study was the design of the linkage model. The secondary purpose was to apply the linkage model to the development of vocational education curricula through interorganizational coordination. Linkage as an invigorating vehicle for education is not an end unto itself, but a means to an end. Therefore, its effectiveness should be measured by the benefits it imparts. The substantive events of the linkage project reported next reflect both the linkage design and the application of linkage for program development.

PROGRESS CHART

SCHOOL DEVELOPMENT			PROGRESS OF SCHOOL DEVELOPMENT AND IMPLEMENTATION	LINKAGE			
				A pre-development inter-organizational dialogue may occur in some cases.			
CONCEPTUAL	1	Formulation of Need		1	NEED DEFINITION	Identification of Need for Formalized Inter-organizational Relationships	PRELINKAGED STATE
	2	Formulation of Ideal Solution		2	FIRST DIALOGUE	Publication of Goals and Objectives	
	3	Projection of Desired Outcome		3		Curriculum Proposal	
	4	Identification of Barriers		4		One-to-One Meetings Define Relevance to Participants	
	5	**Milestone One: First Transformation** Statement of Ideal Concept, Goals and Objectives		5		**Milestone One: Criteria to Motivate Participation in Linkage Process**	
ORGANIZATIONAL	6	Systems-wide Resources and Facilities Planning Criteria		6	LINKAGE FOCUSED EFFORTS	Definition of Area of Interest	ORIENTATION STATE
	7	Selection and Implementation of Suitable Operational (Corporate) Mode		7		Specification of Territoriality	
	8	Financial Criteria and Objectives		8		Identification of Relevant Organizations	
	9	Capital Development		9		Mode of Recruiting Participants	
	10	**Milestone Two: Second Transformation** Statement of Viable Concept		10		Identifying Barriers to Participation	
				11		**Milestone Two: Strategy to Facilitate Cooperation**	
				12		Commitment to Area of Interest	INTRA ORGANIZATION
				13		Commitment to Inter-Organizational Coordination	
				14		Organizational Questionnaire	
				15		Definition of Negotiable Areas of Autonomy Loss	
		Inversion Point ←		16		**Milestone Three: Definition of Perimeter of Coordination** → *Inversion Point*	
OPERATIONAL	11	Design of Education Relevant School Activities		17	EDUCATION FOCUSED EFFORTS	Agreement on Common Goals	LEGITIMATION & IMPLEMENTATION
	12	Design of Industry Relevant School Activities		18		Agreement on Means to Accomplish These Goals	
	13	Task Analysis and Competence-Based Curricula Design		19		Agreement to Achieve an Integrated Design	
	14	Educational Systems Development					
	15	**Milestone Three: Metamorphosis** Statement of Marketable Concept					
IMPLEMENTATION	16	Selection of In-School Facilities and Industry Training Resources					
	17	Choice of Faculty, Administration and Staff					
	18	School Approval by Authorizing Agencies					
	19	Publication of Catalogue and Student Recruitment Efforts					
	20	**Milestone Four: Reality** First Classes are Taught		20		**Milestone Four: Formalizing the agreement for Sustained Integrated Collaboration**	

NOTE: Evaluation, which was the fifth stage of the original process model, was treated as an ongoing procedure and, therefore, not listed as an individual step.

*	+	DEPT. OF FISHERIES	DEPT. OF CULINARY ARTS
		No pre-development dialogue existed. Activities were stimulated by initiating organization.	Pre-development dialogue took place defining local need for professionally-trained restaurant personnel.
1	1	Need was identified by observing and evaluating a primarily family operated local fishing industry which has not kept pace with time	Need was defined by members of the industry, and the requirements for a more than casual co-operative arrangement was voiced. Therefore, the departments of culinary arts and fisheries were chosen as opposites in the linkage model project.
2 3 4 5	2 3	An "ideal" solution, general goals and objectives were defined and published to serve as a stimulus for industry representatives to enter a dialogue. A preliminary list of target participants and and local resources was prepared. (Appendix A)	A first curriculum draft was designed to serve as a stimulus for participation. It was presented to local members of the industry in Dec., 1977 and created substantial early interest to enter dialogue. (Appendix B)
	4	A series of 1:1 meetings with industry members produced a division of opinions; ranging from guarded consent to refusal to participate. Interest in the project	1:1 meetings with chefs and restaurant owners produced enthusiastic support, an enlarged list of proposed participants and a first outline of industry needs and educ-

*School Development +Linkage
NOTE: Numbers parallel those from the Progress Chart.

*	+	DEPT. OF FISHERIES	DEPT. OF CULINARY ARTS
		paralled the educational background of individuals. Barriers to linkage were identified.	ational efforts in other cities and states.
	5	After analyzing barriers, a first strategy to motivate dialogue was devised, carefully defining commitments to "one step at a time." First commitment to attend one meeting and discuss merits of starting a department.	No need for special motivating strategies arose, since the process was a response to industry initiative.
	6	Area of interest was accepted, but some interest was generated by having culinary department assistance in marketing and and developing new fish products. (First Meeting, early February)	Area of interest was pre-defined, but became augmented by overall concept of Institute of Food Industries, to include agriculture, fisheries and industrial food processing. Strong response to concept of inter-departmental/industrial cross fertilization.
	7	Territory for operations was accepted to be Monterey Peninsula; for student recruitment, no boundaries were set.	
6		A framework for systems-wide facilities and resources planning was developed. (Appendix C)	

*School Development +Linkage
NOTE: Numbers parallel those from the Progress Chart.

*	+	DEPT OF FISHERIES	DEPT. OF CULINARY ARTS
7 8		The Institute is to be a limited partnership. First set of financial criteria developed while operating under Intersystems, Inc.	
9		Capital development is deferred until after first term is taught (end of Intersystems umbrella).	
	8	A revised list of proposed participants was developed at first meeting, involving aquaculture industries.	Criteria were developed measuring the relevance of the department to distant industries not self apparently attracted to its services.
	9	Participants were recruited 1:1 by initiating institution.	Contact mode remained 1:1 but industry members began to recruit.
	10	Barriers were identified by participants as problems the industry is experiencing in terms of regulatory efforts and marketing. The initiating institutions identified the major barriers to a cohesive linkage participation and proposed a school which could aid the industry in problem solving.	The primary barrier to participation was time.
	11	Self gain by each member of the industry in exactly definable	Industry initiative precluded any need for extended motivational

*School Development +Linkage
NOTE: Numbers parallel those from the Progress Chart.

*	+	DEPT. OF FISHERIES	DEPT. OF CULINARY ARTS
		terms emerged as a functional strategy for continued co-operation.	strategies.
10		No revision of the original plan was possible at this stage, but an organizational questionnaire was distributed.	After a number of small group consultations, the initial curriculum was revised, academic regulations and a modular calendar were added, including extensive student cost and facilities planning guidelines.
	12 13	Fear of having processes copied, loss of autonomy, and inability to see possible gain were the main barriers. But general dissatisfaction with the state of the industry generated receptivity to view school integration with the industry as potentially beneficial.	Since a majority of chefs were also restaurant or store owners, intra-organizational commitment was present since the beginning. It was expressed verbally at various stages of the development, inter-organizational coordination is common in the industry.
	14	The organizational questionnaire provided vital data about the diversity and complexity of fish (seafood) related industries. It served as a document for curriculum revision and revising all motivational strategies.	The organizational questionnaire revealed very little about the industry, because of the basic sameness of most food service operations.

*School Development +Linkage
NOTE: Numbers parallel those from the Progress Chart.

*	+	DEPT. OF FISHERIES	DEPT. OF CULINARY ARTS
	15	Loss of autonomy was generally described as unacceptable, except in insignificant areas. Collaborative commitments would have to be evaluated on a case by case basis.	A set of criteria was devised which evaluated loss of autonomy opposite financial gain. The finality of a commitment was the prime determining factor.
	16	Participating industries agreed to a coordinated effort of designing a school which, as part of its operation, can actively participate as an industry problem solver. If this was achievable, sustained coordination and a marginal integration with industry would be possible.	Industry members agreed to aid in curriculum and general school design, serve as faculty, accept apprentices and monitor the school's performance.
		INVERSION POINT WAS REACHED.	
11 12	17 18 19	Responding to the pressure of the preceding item, the school design was re-examined, and a new structure developed. It divided school activities into two basic categories: education relevant and industry relevant. This design required a part of the school to become a satellite to the industry.	When the material designed in the department of fisheries was transferred to culinary arts, it became an immediate basis for re-negotiating autonomy versus inter-dependence. It resulted in a design which completely integrates this department into the local restaurant industry.

*School Development +Linkage
NOTE: Numbers parallel those from the Progress Chart.

*	+	DEPT. OF FISHERIES	DEPT. OF CULINARY ARTS
13		With sustained coordination assured following the universal acceptance of the integrated design, a pilot program to commence in Fall term, 1978, was agreed upon. Task analysis for this program serves as a basis for a revised design of the entire department.	Task analysis as a basis for competence based curricula has led to a re-evaluation and complete redevelopment of educational programs. A new curriculum was drafted for implementation Fall, 1978. (Appendix F)
14		Educational systems development is confined to the pilot program until the final integrated design of the department is complete.	Educational systems development is taking place one year at a time in advance. This mode is sensitive to learning from the experiences of implementing the curriculum.
15		No final materials available.	The department's programs and operational structure was transformed to become a partial industry subservient to its major industries. This change is benefiting its instructional programs, the students and participating businesses.
16 17 18 19 20			Facilities to start operations are chosen, faculty and staff are recruited, school approval by the California Office of Postsecondary Education is forthcoming and a

*School Development +Linkage
NOTE: Numbers parallel those from the Progress Chart.

*	+	DEPT. OF FISHERIES	DEPT. OF CULINARY ARTS
			catalog and recruitment materials will be available in August, 1978.

*School Development +Linkage
NOTE: Numbers parallel those from the Progess Chart.

SUMMARY OF ACHIEVEMENTS

1. Transformation of Schools

Inceptive Design: Courses were designed and scheduled to follow a standard college model. The calendar was based on an academic 11-week term, and school activities were confined to routine duties in support of educational programs. By involving relevant industries in the planning and development process via the linkage arrangement the following major innovations were affected:

(a) *(Transformation)* The calendar was revised into a 12-week, 4-module (3 weeks each) design. This permits class duration to suit individual subject requirements. Courses can be scheduled as one to three-week intensives and a new class of students can be enrolled every 3, instead of 12, weeks.

(b) Courses, subject contents, training and test criteria are developed as a product of task analysis, transferring industry requirements, standards and work attitudes to an in-school environment.

(c) *(Metamorphosis)* By developing services and products, which the school can supply directly to the industry, a department was created which coordinates and monitors these efforts. As this portion becomes an industry in itself, the school as all partner industries has undergone a metamorphosis. Instead of the school being a learning institution and industry creating its products or services, now exist two opposite industries--one, with education being its primary objective and production secondary, and two, production (service) based and education secondary.

2. Transformation of Industries:

Prelinkage Conditions: Labor was recruited by standard means; real qualifications of prospective employees could not be assessed until on-the-job observation was possible. The growth and profit potential of each business was confined to the skill of the manager solving barriers by primarily internal resources.

Transformation: By coordinating industry knowledge and efforts with the school, a skilled labor pool will be available and help can be hired to the exact level of job performance. Ongoing education for personnel and updating on latest equipment and techniques will keep the industry abreast with current developments, permitting new dimensions of growth.

Metamorphosis: By achieving an organizational order, which allows integration of all component elements, a new state of industry profit growth, ease of operation, and expansion became possible. Participating businesses and industries could draw from peer as well as school resources for problem solving or growth. They could clarify their own positions by actively participating in the education process; but most of all, they could vastly expand all operations by including education as an integral part of their organizational structure.

3. Transformation of Linkage Model

The Initial Model: This model was created for the purpose of facilitating the processes and involvement of private sector enterprise with an education project. Specifically, it was to aid in establishing a formal arrangement between a new Institute of Food Industries (Department of Fisheries and Aquaculture plus a Department of Culinary Arts) and local, relevant industries. The intent was to create these two departments by welcoming the industries to

provide criteria for school design, curriculum planning, training, and competence standards; also it was to allow the use of industry equipment and facilities to whatever extent feasible. The first linkage model was designed to foster a coordinated effort toward these goals.

Transformation: The first motivating goal to enter a linkage arrangement was the reward of aiding in the creation of a school. As barriers mounted during the early stages, it became apparent that this was not sufficient motivation to continue, and the linkage process would have to provide its own returns. The model had to be reexamined whether it contained enough provisions to stimulate a profit-minded industry. Since the linkage process can offer neither products nor direct services to participating businesses, its nature is confined to be catalytic, and the measure of its success is to be the vehicle which allows all participants to seek gain by advancing to a higher inter-organizational order. The first transformation of the model, therefore, included such modes as organizational questionnaires, formation of inter-organizational needs versus resources criteria and a germinating cell to bring about an integrated inter-organizational order.

Metamorphosis: Where it could have been possible to achieve milestones prior to the inversion point by a less formal arrangement than linkage, integrating a school with the industries it serves in the manner of this case study would not have been possible without the linkage model. After the parameters of coordination were defined (Milestone Three) and efforts were on their inceptive goals, the complete recreation of the original school design brought about the final change in the linkage model. By recording the growth pattern of the school, linkage evolution could be coordinated with school development; the inversion point was defined and a 20-point planning chart constructed. The formalized agreement no longer terminated upon comple-

tion or planning or implementation stages, but became a sustained asset to the collective effort. Benefits to all participants of an integrated effort shared equally and formally between educational institution and private sector became so evident that the creation of a school or department, though still the best initial stimulus, is no longer the primary motivation.

CHAPTER SIX:

SUMMARY

The chapters in this report have provided a background for the development of the products for this interorganizational linkage project. Topics covered in these chapters have included:

- the statement of the problem;
- project objectives and organization;
- highlights of the literature review;
- a summary of events in the public post-secondary educational setting, and
- a summary of events in the private post-secondary educational setting.

As the project entered into the pilot-test phase of the interorganizational linkage arrangements, staff began to develop the project's products.

For the public setting these products include:

- a generic procedural model for developing linkage based upon the literature review and the activity between the Community College Centers' Medical Assistant Program and the Volunteer Services Program of Presbyterian Hospital.
- A case study detailing the experiences of the above two agencies as this experience relates to the parameters specified in the model.
- An implementation guide to linkage and a guide to evaluation supplement intended to help those desiring to develop and implement a linkage program.

These three documents are found in Volume Two.

A model for linkage of vocational education programs in private post-secondary institutions with industry, business, and labor is contained in Volume Three.

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APPENDICES

A. DESCRIPTION OF THE MEDICAL ASSISTANT PROGRAM

B. ADVISORY COMMITTEE-MEDICAL ASSISTANT PROGRAM

C. DESCRIPTION OF VOLUNTEER SERVICES PROGRAM - PRESBYTERIAN HOSPITAL

D. ADVISORY COMMITTEE QUESTIONNAIRE

E. DESIGN COMMITTEE QUESTIONNAIRE: PART I

F. DESIGN COMMITTEE QUESTIONNAIRE: PART II

G. DESIGN COMMITTEE POST QUESTIONNAIRES

H. STUDENT QUESTIONNAIRE

APPENDIX A

DESCRIPTION OF THE MEDICAL ASSISTANT PROGRAM

The primary goal of the Medical Assistant Program (MAP) is to introduce students to the responsibilities and skills related to the clinical aide who assists the physician in a private practice or in hospital facilities. Students who have completed training should qualify for entry level positions in the allied health field, medical assistant, hospital employee such as ward clerk, records assistant, admitting clerk and related jobs in private industry. During MAP training the student is introduced to the job requirements of the clinical aide or medical office manager in the assisting, care and treatment of the patient, and learns related marketable skills.

The overall goal of the course is to provide training in skills related to the following areas: (1) sterilizing and preparation of examination trays, (2) assisting in hematology and urology laboratories, (3) the EKG department, (4) reception room, and (5) office of the accounting department (private practice, to include billing, collections, payroll and tax records). The focus of the MAP training includes course work in the following areas: (1) Office Management Unit - including bookkeeping, billing, collections, tax records, payroll and reception routines, and (2) Clinical Assisting Unit - including table-side assisting, instrumentation, laboratory assisting in urinalysis and routine hematology, sterilizing, performing EKG tests and mountings, allied reports, taking of vital signs, and maintaining medical records.

During the course training the following procedures are used to determine how well the student is meeting the goals and objectives of the course:

- Theory tests on a weekly basis using text and practical experience; grade determined by accuracy of performance.
- Laboratory and practical demonstrations of skills conducted by students on a monthly basis; student grade is determined by proficiency of performing skills.

. Internship training in a hospital volunteer services program.

The criteria for determining the final grade is based on the student's accuracy, proficiency, manual skill in performing clinical demonstrations, appearance, professional demeanor, satisfactory completion of assignments, and hospital internship assignment.

Each MAP applicant must have a high school education or equivalent; have the ability to speak and read the English language, and comprehend basic mathematics at or above the 10th grade level. Testing procedures are required to prove these levels, but there are no specific course prerequisites. The program takes up to one year to complete. Students may leave when all segments have been completed successfully.

Each student must complete a total of 1,000 hours in each of the following courses:

Course Title	Hours
Medical Assisting I and II	289
Medical Typing I and II	205
Medical Transcribing I	60
Medical Terminology and Anatomy I and II	234
Metric System Math	36
American Red Cross First Aid Course	15
American Red Cross Cardio-Pulmonary Resuscitation	21
In-Service Training	140
Total Hours	1,000

Requirements for Community College Certificate of Completion:

1. Completion of required number of hours.
2. Completion of required courses with a C grade (70) or higher in each course.
3. Attain specified entry level Civil Service speed testing with certificate.
4. Production performance goals in typing and transcribing.
5. Receipt of ARC First Aid and CPR Certificates.
6. Completion of in-service training in a professional manner.
7. Demonstrate by final examination, proficiency in all required courses with a C grade or higher.

APPENDIX B

ADVISORY COMMITTEE - MEDICAL ASSISTANT PROGRAM

Paris Baxter	Training Officer San Francisco City/County Hospital
Dr. Wayne Bayless, M.D.	Private Program
Jewell Becknell, R.N.	Assistant Director Patient Care Services
Betty Jewell	Department of Nursing, Letterman Army Medical Center, Presidio
Pat Lotspeich	Area Coordinator Visiting Nurse Association of S.F.
Dorothy Mc Leay	Medical Assisting Program
Roy Morrison	Personnel Staff San Francisco General Hospital
Thelda Poteet	Departmental Personnel Officer San Francisco City/County Hospital
Vera Pyle	Supervisor Medical Transcription Department
Jackie Schilling	Employment Representative University of California, S.F.
Paul Shedd	Personnel, Presbyterian Hospital
Don Smith, Coordinator	Classification Services, University of California, S.F.
Fran Baron	Director Galileo Community College Center
Ray Bergman	Assistant Director Galileo Community College Center
Jean Bramer	Testing Specialist Student Service Center San Francisco Community College Centers
Larry Broussal	Administrative Director Student Services San Francisco Community College Centers

Mary Caldwell	Instructor Medical Assisting Program
Lydia Gerone	Instructor Medical Assisting Program
Jeanne Duckett	Instructor Medical Assisting Program
Jack Harrington	Assistant Director Student Service Center
Margaret Guichard	Instructor Medical Assisting Program
Zonia Olsen	Instructor Medical Assisting Program
William Upton	Linkage Coordinator Student Service Center

APPENDIX C

DESCRIPTION OF VOLUNTEER SERVICES PROGRAM

The philosophy of the Volunteer Services Program is to provide the best in volunteer services to Presbyterian Hospital and also to all patients served at, and doctors located in, Pacific Medical Center.

The objectives of the program are as follows:

1. Develop quasi-professional corps of volunteers who can serve in many areas of the hospital.
2. Augment recruitment, with goal of at least 350 "active" volunteers in any given month, by end of fiscal year.
3. Increase percentage of male volunteers and married couples who will volunteer as a team, particularly during evening hours.
4. Present monthly orientations for new volunteers, and quarterly re-orientation/training sessions for all volunteers.
5. Increase community involvement, including promotion of Pacific Medical Center volunteer arm to San Francisco business and philanthropic communities.
6. Improve and develop programs for recognition of volunteers.
7. Develop and enlarge evening volunteer services, with special attention given to Visiting Volunteer and Gift Shop staffing; also volunteer staffing with trained volunteers for Nursing Nodes.
8. Improve image of Presbyterian Hospital's volunteer services in every way possible.

The specific areas of the hospital where student interns are generally placed through Volunteer Services as part of the internship program, depending upon the availability of positions, includes the following departments:

1. Emergency Unit
2. Outpatient Clinic
3. Mail and Escort
4. Medical Staff Office
5. EEG Laboratory

APPENDIX D

ADVISORY COMMITTEE QUESTIONNAIRE

PART I

The purpose of this portion of the questionnaire is to obtain information that we can use to improve the effectiveness of Advisory Committee Meetings. No names, please.

1. Prior to this meeting, how familiar were you with the Community College Centers Medical Assisting Program (MAP)?

   ____ very familiar

   ____ somewhat familiar

   ____ knew very little about it

2. Has this meeting helped increase your knowledge of the MAP?

   ____ yes

   ____ somewhat

   ____ no

3. What types of things do you still want to know?

4. What can we do to improve the meetings?

5. What types of tasks do you think the Advisory Committee should perform?

ADVISORY COMMITTEE QUESTIONNAIRE:

PART II

The purpose of this portion of the questionnaire is to increase our understanding of the potential for linkage arrangements. Your name and the institution you represent will enable us to utilize your responses more effectively.

1. NAME
2. INSTITUTION OR AREA OF MEDICAL PROFESSION REPRESENTED
3. What types of sharing, cooperative, or linkage arrangements do you (or your institution) now have with a) the MAP? b) other programs offered by the Community College District?

Have you in the past, or are you currently engaged in any type of sharing, cooperative, or linkage arrangements with another educational program or institution?

4. Following is a list of general linkage or cooperative arrangements. Please check those which represent a potential possibility for establishing a specific arrangement between the MAP and you or your institution.

____ Strengthening the MAP student internship (work experience) program

____ Facility sharing for instruction

____ Library sharing

____ Instructional materials sharing (films, etc.)

____ Personnel or faculty sharing (guest lectures, etc.)

____ Inservice training

____ Job placement

____ Providing a vehicle or resource to make current curriculum content more relevant

____ Arranging for initial design or development of new programs

____ Interacting on a continuous basis with each other for decision-making and program development, and implementation

____ Other (specify)

5. What do you feel would be the benefits to you or your institution from initiating or strengthening linkage or cooperative arrangements

6. What do you think would be the costs or disadvantages?

APPENDIX E

DESIGN COMMITTEE QUESTIONNAIRE

PART I

1. What previous knowledge did you have regarding the Medical Assisting Program/ Presbyterian Hospital in terms of goals, structure, programs, etc.?

2. What prior communication did you have with the Medical Assisting Program/ Presbyterian Hospital?

3. In terms of your program priorities, in what way is it important to improve the cooperative arrangements that facilitate the internship program?

4. How effective was the process we used to design the linkage program? (i.e., meetings conducted with Far West Laboratory and Medical Assisting Program staff)

   very somewhat better than nothing not at all

5. What aspects were most helpful to you?

6. Please note on the following five point scale changes that would improve the design process:

5	4	3	2	1
more required		about right		less required

(The above scale is to be used for all items)

a. Time spent in meetings between the two agencies devoted to general clarification of each organization's goals, programs.

5 4 3 2 1

b. Time spent in meetings between the two agencies devoted to designing the specific program.

5 4 3 2 1

c. Personnel involved in the design process.

5 4 3 2 1

Specify who: _____

d. Time spent on discussing general linkage concepts, theory.

5 4 3 2 1

e. Information about each agency that would facilitate designing your specific program.

5 4 3 2 1

f. Clarification of staff and administrative roles, expectations.

5 4 3 2 1

7. Suggestions for other improvements in design activities?

8. In what ways is an external, neutral third party (in this case, Far West) helpful for the linkage/design process?

In what ways is an external, neutral third party unnecessary?

9. Would the linkage program have occurred without the intervention of a third party?

10. How have your perceptions of the Medical Assisting Program/Volunteer Services Program changed throughout the design activities?

11. Even if you do not actually carry out the plans for improving the internship program, has the design activity been beneficial to your program? In what ways?

What have been the major costs to your organization (i.e., time, paper work)?

NAME: _____

DATE: _____

APPENDIX F

DESIGN COMMITTEE QUESTIONNAIRE

PART II

A. Adequacy

1. Do you feel that the program, as designed, will enable the kind and extent of Community College/Hospital linkage you feel is most important?

   What, if any, kinds of linkages would you like to see that are not provided for in the program design?

2. Does the program design effectively utilize the resources that are now available in the MAP? In the Community College? In the Hospital?

   Should other resources be incorporated? What?

3. In what ways will the linkage program help your program attain its own goals?

(Administered on September 22, 1977)
Pilot Program Orientation

B. Feasibility

4. To what extent do you think the program will be carried out as specified in the program design?

Completely as Specified	Almost Completely as Specified	More or Less as Specified	Quite Unlike as Specified

5. What aspects do you think will be most difficult to implement? Why?

6. What can be done in advance to prevent or minimize potential problems?

What, if any, institutional arrangements could be made between the administration of Presbyterian Hospital and the Community College Centers to make the program run more smoothly?

7. What do you anticipate as being the major costs of this linkage program (e.g., extra paper work, additional personnel, etc., loss of independence of the program?)

POST-QUESTIONNAIRE

San Francisco Community College Centers'
Medical Assisting Program

1. To what extent do you feel that the linkage program between the MAP and Presbyterian Hospital was successful? (Please circle one)

4	3	2	1
Very Successful	Somewhat Successful	Somewhat Unsuccessful	Unsuccessful

2. Based on your perceptions, to what degree have the procedures for conducting the internship program improved in the following areas? (Please fill in each blank using the rating scale below)

3	2	1
Improved	Not Improved	No Opinion

___ Exchange of information between the MAP and Presbyterian Hospital

___ Standardization of procedures for implementing the linkage program

___ Clarification of administrative and staff roles related to implementation of the program

___ Involvement of MAP staff and Community College administration in project planning from the onset

___ Formalization and standardization of agreements between the MAP and the hospital related to the linkage program

___ Opportunities to increase the MAP's status by engaging in the linkage program

___ Opportunities to expand the resource base by seeking new linkages with other organizations (i.e. other hospitals)

3. What have been the major linkage activities which were most useful in implementing the program? (Please check appropriate activities)

___ Procedures for orienting students to the Hospital Volunteer Services Program in terms of available jobs within hospital units

___ Description of the Volunteer Services Program

___ Description of skills required by interns to work in specific hospital units

___ Procedures for monitoring student attendance during internship training at the hospital site

___ Unit Supervisors' Student Evaluation Form

___ Standardization of procedures for processing student evaluation forms completed by hospital personnel

___ Other (Please specify)

4. To what extent were you able to carry out the program as specified? (Please circle one)

Completely as Designed	Almost Completely as Designed	More or Less as Designed	Not at all as Designed

5. Why were you not able to carry it out as designed?

6. What provisions should be made, if any, to facilitate a smoother running program between the Community College and the hospital?

7. What were the major costs, if any, of the linkage program?

___ Too much staff time

___ Extra paper work

___ Meetings

___ Exposure of organization

___ Other (Please specify)

8. How has your attitude changed toward the hospital?

9. How important was it to have Far West Laboratory involved in the MAP? (Please circle one)

4	3	2	1
Very Important	Somewhat Important	Not Important	No Opinion

10. What could Far West do to improve its role as Linkage Facilitator?

11. Other Comments:

POST-QUESTIONNAIRE

Presbyterian Hospital Volunteer Services

1. To what extent do you feel that the linkage program between the hospital and the Community College Medical Assisting Program was successful? (Please circle one)

4	3	2	1
Very Successful	Somewhat Successful	Somewhat Unsuccessful	Unsuccessful

2. Based on your perceptions, to what degree have the procedures for conducting the internship program improved in the following areas? (Please fill in each blank using the rating scale below)

3	2	1
Improved	Not Improved	No Opinion

___ Exchange of information between Presbyterian Hospital and the MAP

___ Standardization of procedures for implementing the linkage program

___ Clarification of administrative and staff roles related to implementation of the program

___ Involvement of hospital staff and administration in project planning from the onset

___ Formalization and standardization of agreements between the hospital and the MAP related to the linkage program

___ Opportunities to increase the Volunteer Services Program status by engaging in the linkage program

___ Opportunities to expand the resource base by seeking new linkages with other Community College programs

3. What have been the major linkage activities which were most useful in implementing the program? (Please check appropriate activities)

___ Procedures for orienting students to the Hospital Volunteer Services Program in terms of available jobs within hospital units

___ Description of the Medical Assisting Program

___ Description of skills required by interns to work in specific hospital units

___ Procedures for monitoring student attendance during internship training at the hospital site

___ Unit Supervisors' evaluation of student performance (Student Evaluation Form)

___ Standardization of procedures for processing student evaluation forms completed by hospital personnel

___ Other (Please specify)

4. To what extent were you able to carry out the program as specified? (Please circle one)

Completely as Designed	Almost Completely as Designed	More or Less as Designed	Not at all as Designed

5. Why were you not able to carry it out as designed?

6. What provisions should be made, if any, to facilitate a smoother running program between the hospital and the Community College?

7. What were the major costs, if any, of the linkage program?

___ Too much staff time

___ Extra paper work

___ Meetings

___ Exposure of organization

___ Other (Please Specify)

8. How has your attitude changed toward the Medical Assisting Program?

9. How important was it to have Far West Laboratory involved with the hospital and the Medical Assisting Program? (Please circle one)

4	3	2	1
Very Important	Somewhat Important	Not Important	No Opinion

10. What could Far West do to improve its role as Linkage Facilitator?

11. Other Comments:

APPENDIX H

NAME _____

STUDENT QUESTIONNAIRE

1. How useful was the information you received from your instructor about the student internship experience at Presbyterian Hospital? (Please use the following scale to fill in the blanks)

4	3	2	1
Very Useful	Useful	Somewhat Useful	Topic was not Covered

___ Description of Volunteer Services Program

___ Description of procedures for conducting an interview with the Volunteer Services Director

___ Types of jobs available in the Hospital during internship experience

___ Information on how to schedule an interview with the Volunteer Services Director

___ Instructions on filling out forms prior to Hospital interview

___ Description of standards of dress and manner while working in a hospital setting

___ Other (Please specify)_____

_____

2. How useful was the information provided by the Presbyterian Hospital Volunteer Services Director? (Please use the following scale to fill in the blanks)

4	3	2	1
Very Useful	Useful	Somewhat Useful	Topic was not Covered

___ Description of Volunteer Services Program

___ Types of jobs available in the Hospital during internship experience

___ Ways you would be evaluated by the Hospital staff during internship training

___ Description of standards of dress and manner while working in a hospital setting

___ Other (Please specify) _____

_____

3. What additional information or instructions would have helped you as a volunteer?

   1) From your instructor?

   2) From the Volunteer Services Director?

   3) From your Unit Supervisor?

4. What expectations did you have about working in the Hospital before you were selected as a volunteer?

5. How have your expectations changed since you have worked as a volunteer?

6. How would you rate your experience with Volunteer Services in terms of providing adequate training for a job? (Please circle one)

4	3	2	1
Excellent	Very Good	Fair	Poor

7. What is your overall attitude toward the internship program with Volunteer Services?

8. What aspects of the Medical Assisting training do you feel were most useful to you?

___ Medical Assisting Course

___ Internship in Hospital

___ Both the course training and internship program

9. What suggestions do you have for improving the information you received from the College and/or Volunteer Services prior to your internship in the Hospital?